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September 30, 2013

TO: Each Supervisor

FROM: Jonathan E. Fielding, M.D., M.P.H.  
Director and Health Officer

SUBJECT: **HEALTH OFFICER ORDER FOR MANDATORY ANNUAL INFLUENZA  
VACCINATION FOR HEALTHCARE PERSONNEL IN ACUTE CARE,  
INTERMEDIATE CARE, AND SKILLED NURSING FACILITIES**

### Summary

This is to inform you that I plan to issue a health officer order that requires mandatory annual influenza vaccination for healthcare personnel in acute care, intermediate care, and skilled nursing facilities for the influenza season. Evidence supports that immunization of health care personnel reduces the frequency of infection in patients in these facilities, which can be life threatening. Vaccination mandates can increase immunization rates among healthcare personnel and reduce their frequency of influenza infection and absenteeism during the flu season. Covered personnel under the mandatory order not being vaccinated will be required to wear a mask in patient areas.

### Background

Influenza is a highly communicable disease. It exists all year, but infection rates and the severity of symptoms increase markedly during what is commonly called "flu season" in the winter months. Each year, 5 to 15 percent of the population of the United States is affected by influenza infection, leading to an average of more than 200,000 hospitalizations and 24,000 deaths. Patients in healthcare facilities—most especially young children, pregnant women, elderly, and persons with chronic health conditions—are particularly vulnerable to infection and its subsequent complications.

Since 1981, the Centers for Disease Control and Prevention (CDC) has recommended that healthcare personnel (HCP) be vaccinated against influenza to prevent transmission to colleagues and patients who are vulnerable to serious influenza complications. Flu in the workplace can lead to increased absences, lower productivity, and higher medical costs. In addition, transmission from HCP to patients has been documented in a variety of acute care settings including neonatal intensive care units, pediatric and general medical wards, transplant units, oncology units, and emergency departments. Influenza vaccination is effective in reducing influenza and mandatory vaccination programs in healthcare settings have been proven to increase influenza vaccination rates. Thus, mandatory vaccination policies in acute care hospitals can lead to decreased illness among personnel, decreased staff absenteeism, and possibly decreased morbidity and mortality among patients.

By law, acute care hospitals in California must annually offer free influenza vaccinations on-site to their employees and require all to be vaccinated; any employee who elects not to be vaccinated must provide the hospital with a written declaration that he or she has declined the vaccination [California Health and Safety Code Section 1288.7(a)]. In addition, occupational safety regulations mandate that many types of health care facilities, including hospitals, skilled nursing facilities, and long-term health care facilities make seasonal influenza vaccine reasonably available to all employees with occupational exposure and ensure that each employee who refuses the vaccine signs a statement declining vaccination [Title 8 California Code of Regulations, Section 5199 (c)(6)(D) & (h)(10)].

Despite high rates of compliance with these laws, the ability of HCPs to decline vaccination means that vaccination rates for seasonal influenza fall far short of the 90 percent target set by "Healthy People 2020." During the 2011-12 flu season in Los Angeles County, rates of HCP vaccination were 40-60 percent. In contrast, policies mandating vaccination or masking have been shown to raise vaccination rates among HCP above 95 percent.

Many facilities and counties already mandate flu vaccination among HCP. A recent survey of all Los Angeles County hospitals (n=100) showed 33 of 89 (37 percent) responding hospitals already require flu vaccine for their HCP. Currently, 14 other counties in California have issued health officer orders mandating flu vaccination among HCP. Attachment A provides a complete rationale for the health officer order.

#### **Current Actions**

I plan to issue a Health Office Order (see Attachment B) mandating every licensed acute care hospital, skilled nursing facility, and intermediate care facility in Los Angeles County to implement a program mandating healthcare personnel at such facility to receive an annual influenza vaccination or, if they decline, to wear a mask for the duration of the influenza season while in contact with patients or working in patient-care areas.

"Health care personnel" are all persons, including paid and unpaid employees, contractors, students, and volunteers, who work in areas where patient care is provided in a facility subject to the Order or who otherwise have direct contact with patients at such a facility.

This Order applies to each influenza season, defined as November 1 of one year to March 31 of the following year. If surveillance data in a particular year demonstrate that the influenza season is different than November 1 to March 31, this period may be changed by a further order.

If you have any questions or would like additional information, please let me know.

JEF:fs  
#02784

c: Chief Executive Officer  
County Counsel  
Executive Officer, Board of Supervisors

## **Health Officer Order dated October 1, 2013**

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As Health Officer for Los Angeles County, Dr. Jonathan E. Fielding is issuing a Health Officer Order mandating that all general acute care hospitals, intermediate care facilities, and skilled nursing facilities in Los Angeles County require their healthcare personnel (HCPs) who work in patient care areas, to receive an annual influenza vaccination during the influenza season.

### **Supporting Rationale**

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Flu in the workplace can lead to increased absences, lower productivity, and higher medical costs. In addition, nosocomial transmission from healthcare personnel to patients has been documented in a variety of acute care settings including neonatal intensive care units, pediatric and general medical wards, transplant units, oncology units, and emergency departments.<sup>1</sup>

Influenza vaccination is effective in reducing influenza, and mandatory vaccination programs in healthcare settings have demonstrated increased influenza vaccination rates. Thus, mandatory vaccination policies in health care facilities can lead to decreased illness among personnel, decreased staff absenteeism, and would logically lead to decreased morbidity and mortality among patients.

### **Truths about Influenza in Healthcare Settings**

Unvaccinated personnel can transmit the flu to other personnel, which can lead to decreased productivity and increased absenteeism. Healthcare personnel can also transmit influenza to patients.

- Studies suggest that up to 25% of healthcare personnel are infected with influenza each season.<sup>2,3</sup>
- Healthcare personnel may be more likely to work when ill than other professions, which increases the risk for flu transmission in healthcare facilities.
- As many as 1 in 2 infected people never show classic flu symptoms,<sup>4</sup> but can shed virus for 5-10 days. Thus, asymptomatic personnel can spread influenza unknowingly.
- Patient admissions and healthcare personnel absenteeism are typically higher during the flu season, which increases the impact of flu-related absenteeism on operations of these health care facilities.
- Influenza infection that is acquired during a hospital stay (nosocomial) leads to increased hospital days and mortality for inpatients<sup>5</sup> and the CDC notes that higher staff vaccination levels have been associated with a lower risk of nosocomial flu cases and mortality.<sup>6</sup>

### **Impact of Influenza Vaccination on Infection, Illness and Absenteeism**

When well matched to the circulating flu strains, Inactivated Influenza Vaccine (flu shot) and Live Attenuated Influenza Vaccine (nasal spray) are effective in preventing illness and may lead to reductions in provider visits, complications, hospitalizations, and absenteeism in healthy adults under 65 years of age. Reduced absenteeism during the flu season is especially beneficial for hospitals, when bed-days and staff illness tend to be high.

- Two randomized control studies have shown reductions in influenza illness. In a season when the flu vaccine was well matched to circulating strains, influenza vaccination was found to be 88% effective in preventing influenza type A infection and 89% effective in preventing influenza type B infection in healthcare personnel.<sup>7</sup> In the second study, healthy working adults who were vaccinated against flu were found to have 34% fewer incidents of influenza-like illness (ILI), 42% fewer doctor visits, and 32% fewer sick days.<sup>8</sup>

## **Rationale for Mandated Influenza Vaccination for Healthcare Personnel**

- Results of research focused on absenteeism vary but several studies suggest that vaccination of healthcare personnel can reduce work absences.

A randomized, placebo-controlled double-blind study of the impact of vaccination on absenteeism in a children's hospital found that influenza vaccination reduced absenteeism related to respiratory infections by 28%.<sup>9</sup> In another randomized double-blind controlled trial conducted over 3 consecutive years, vaccinated personnel had 29% fewer cumulative days of febrile respiratory illness and 53% fewer cumulative days of work absence than those in the control group. While the results were in the expected direction, neither difference was statistically significant. The authors note that the impact of vaccination on absenteeism may have been moderated by the fact that healthcare personnel may work when ill. Of note, no absences related to adverse vaccination events were reported among study subjects.<sup>7</sup>

### **Impact of Influenza Vaccination in Healthcare Settings Relative to Patient Protection**

- Several research studies suggest that vaccinating healthcare personnel can reduce patient morbidity and mortality. On average, HCP vaccination rates range between 65-70%. By increasing vaccination rates substantially, amongst HCPs, patient morbidity and mortality is likely to decrease.

#### **Long-term Care Facilities**

Despite the fact that a recent (2010) Cochrane review raised methodological questions regarding several studies which demonstrate the impact of HCP vaccination on patient health, there is substantial evidence from other studies which demonstrate that vaccination in healthcare settings does decrease influenza transmission from HCPs to patients, particularly in long-term care settings.<sup>10</sup>

Studies in long-term care settings have shown that staff vaccination against influenza has been associated with reductions in all-cause mortality among patients,<sup>2,3</sup> influenza-like illness (ILI),<sup>11</sup> and hospitalizations with ILI.<sup>10</sup> In addition, one long-term care study suggested that although staff vaccination rates did not independently predict ILI outbreaks, high rates of vaccination among *both* staff and residents can substantially reduce the rate and impact of influenza outbreaks.<sup>12</sup>

#### **Acute Care Facilities**

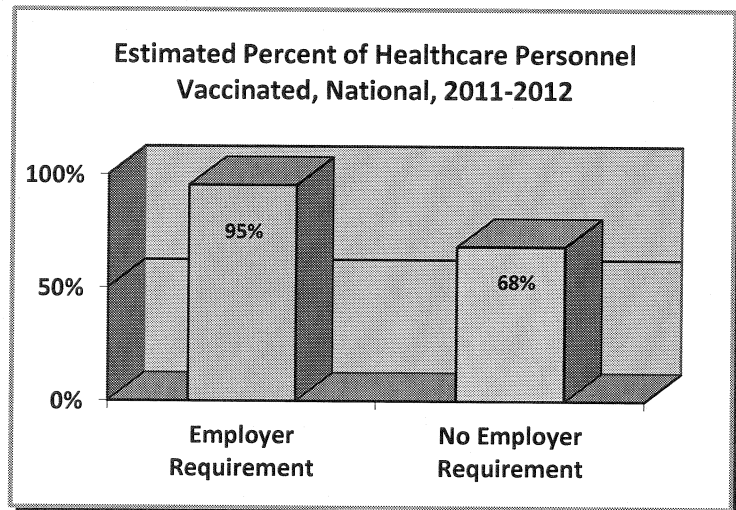
Three published studies suggest a potential positive impact of healthcare personnel vaccination on patient outcomes in acute care settings. A study conducted in a tertiary care academic hospital in the United States suggested that there is a significant inverse association between healthcare personnel vaccination rates and the rate of nosocomial influenza among patients, suggesting that increasing rates may lower nosocomial infections.<sup>13</sup> A modeling study suggested that the relative effect of healthcare personnel vaccination is lower in hospitals than nursing homes, but that the absolute number of infections that can be prevented in the hospital is higher, because of higher hazard rates.<sup>14</sup> Further, a pragmatic cluster randomized controlled trial conducted recently in the Netherlands demonstrated that the intervention hospitals, where influenza vaccination was higher, showed approximately half the rate of nosocomial influenza and/or pneumonia infection in hospital inpatients.<sup>15</sup>

## Rationale for Mandated Influenza Vaccination for Healthcare Personnel

### Impact of Mandatory Vaccination Policies on Vaccination Rates

Flu vaccination rates among healthcare personnel are suboptimal, which leaves workers and patients, at higher risk for illness, complications and death. Mandatory vaccination seems to offer the best opportunity to significantly increase vaccination coverage among healthcare personnel.

- Seasonal flu vaccination rates among healthcare personnel fall short of the Healthy People 2020 standard of 90%.<sup>16</sup> Nationally, during the 2011-2012 flu season, an estimated 67% of healthcare personnel were vaccinated against influenza. Vaccination coverage was highest among hospital-based healthcare personnel (76.9%), but approximately 1 in 4 hospital personnel remained unvaccinated.<sup>17</sup>
- Mandatory vaccination policies instituted at acute care hospitals have been proven to increase immunization rates among healthcare personnel. At the national level, coverage for healthcare personnel working in hospitals that required influenza vaccination in the 2011-2012 flu season was 95.2%, compared to 68.2% for personnel working in hospitals that did not require vaccination.<sup>17</sup>
- In a review of hospital policies and state laws regarding healthcare personnel vaccination, increased healthcare personnel vaccination rates were significantly associated with mandated vaccination policies that included: termination or other repercussions for non-compliance, including masking or reassignment. State laws, like California's, which require hospitals to offer vaccine to employees at no cost, educate employees, and/or require staff to be vaccinated or sign a declination, were not associated with higher vaccination rates among personnel.<sup>18</sup>
- At this time, there is insufficient evidence on whether masking asymptomatic personnel reduces flu transmission, but anecdotal reports suggest that requiring masking for unvaccinated staff can increase compliance with mandatory vaccination policies. This was reported by researchers in Germany, where flu vaccination rates for healthcare personnel increased from 33% to 52% in the 10 days following implementation of a masking requirement for unvaccinated personnel.<sup>19</sup> In the U.S., an author of a five-year study at University of California Irvine Medical Center suggested that the masking requirement included in their mandatory vaccination program may have "provided sufficient disincentive to encourage healthcare providers to prioritize vaccination."<sup>20</sup>
- Mandatory vaccination policies have been instituted by hospitals, the Department of Defense, and municipalities. In addition, a California law, Cal-OSHA, and The Joint Commission require facilities to offer influenza vaccinations at no charge to personnel, as part of the facilities' infection control programs.



## Rationale for Mandated Influenza Vaccination for Healthcare Personnel

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## Rationale for Mandated Influenza Vaccination for Healthcare Personnel

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October 1, 2013

**TO:** Licensed Acute Care Hospitals, Skilled Nursing Facilities, Long-Term Care Facilities, and Intermediate Care Facilities in Los Angeles County

**FROM:** Jonathan E. Fielding, M.D., M.P.H., Director and Health Officer, Los Angeles County

**RE:** Health Officer Order for Annual Influenza Vaccination Programs for Healthcare Personnel or Masking of Health Care Workers during the Influenza Season



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To lower the risk of transmission of influenza to patients in licensed acute care hospitals, skilled nursing facilities, and intermediate care facilities in the County, I am issuing this Health Officer Order mandating that these licensed facilities supplement their existing obligation to assist their healthcare personnel (HCP) to obtain influenza vaccinations by requiring that those HCP who decline to be vaccinated wear a mask when they are in contact with patients during the annual influenza season.

Influenza is a highly communicable disease. It exists all year, but infection rates and the severity of symptoms increase markedly during what is commonly called “flu season” in the winter months. Each year, 5 to 15% of the population of the United States is affected by influenza infection, leading to an average of more than 200,000 hospitalizations and 24,000 deaths. Unvaccinated HCP are not only at risk for influenza but can also transmit the virus to their coworkers and patients. Patients in healthcare facilities—most especially young children, pregnant women, elderly, and persons with chronic health conditions—are particularly vulnerable to infection and its subsequent complications.

By law, acute care hospitals in California must annually offer free influenza vaccinations on-site to their employees and require all to be vaccinated; any employee who elects not to be vaccinated must provide the hospital with a written declaration that he or she has declined the vaccination [Cal. Health & Safety Code §1288.7(a)]. In addition, occupational safety regulations mandate that many types of health care facilities, including hospitals, skilled nursing facilities, and long-term health care facilities make seasonal influenza vaccine reasonably available to all employees with occupational exposure and ensure that each employee who refuses the vaccine signs a statement declining vaccination [8 Cal. Code Regs. §5199 (c)(6)(D) & (h)(10)]. Despite high rates of compliance with these laws, the ability of HCP to decline vaccination means that vaccination rates for seasonal influenza fall far short of the 90% target set by “Healthy People 2020.” In Los Angeles County, rates of HCP vaccination are 40-60%. In contrast, policies mandating vaccination or masking have been shown to raise vaccination rates among HCP above 95%.

**ORDER:** Pursuant to my authority under §120175 of the California Health and Safety Code, I hereby order every licensed acute care hospital, skilled nursing facility, and intermediate care facility within the County of Los Angeles public health jurisdiction to implement a program under which healthcare personnel at such facility receive an annual influenza vaccination for the current season or wear a mask for the duration of the influenza season while in contact with patients or working in patient-care areas.

**PERSONS COVERED:** For the purposes of this Order, “health care personnel” are all persons, including paid and unpaid employees, contractors, students, and volunteers, who work in areas where patient care is provided in a licensed facility subject to this Order or who otherwise have direct contact with patients at such a facility.

**DURATION OF ORDER:** Until it is rescinded, this Order applies to each influenza season, defined as November 1 of one year to March 31 of the following year. If surveillance data in a particular year demonstrate that the influenza season is different than November 1 to March 31, this period may be changed by a further order.

The Los Angeles County Department of Public Health shares with the county’s healthcare professionals and facilities the goal that our population receives safe and effective care. We trust that all facilities subject to this Order will comply fully with it and will notify their HCP of its provisions. We hope that HCP in other facilities, such as physicians’ offices, will follow the strong recommendation that they voluntarily adopt the same protective procedures.